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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/903,081	07/10/2001	Richard E. Demaray	M-11522 US	1225
22852 7590 12/18/2006 FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 901 NEW YORK AVENUE, NW WASHINGTON, DC 20001-4413			EXAMINER HOFFMANN, JOHN M	
			ART UNIT	PAPER NUMBER
			1731	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		12/18/2006	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	Application No. 09/903,081	Applicant(s) DEMARAY ET AL.	
	Examiner John Hoffmann	Art Unit 1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 06 November 2006.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 14-20, 24-27 and 29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 14-20, 24-27 and 29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/19/06 has been entered.

### ***Information Disclosure Statement***

The information disclosure statement filed 10-19-2006 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered. The Korean patent is lined through on the PTO/SB/08 because no copy was provided. Although there was a Korean patent provided by applicant – it did not have the indicated publication date as indicated on the list – and because the Korean patent has nothing to do with the present subject matter. In the Non-Patent Literature – Agrawal is lined through because the copy supplied lacks page 361.

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The information disclosure statement filed 10-19-2006 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because the dates of publication (for non-patent documents are not provided. From MPEP 609(III) : The date of publication

supplied must include at least the month and year of publication, except that the year of publication (without the month) will be accepted if the applicant points out in the information disclosure statement that the year of publication is sufficiently earlier than the effective U.S. filing date and any foreign priority date so that the particular month of publication is not in issue.

It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609 ¶ C(1). The same applies for the IDS of 6 November 2006.

### ***Claim Rejections - 35 USC § 103***

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nourshargh 4619680 in view of Liu 6117345 and Bazylenko 6154582.

Nourshargh discloses most of the invention as claimed – as discussed in prior Office actions; figure 2 (a)-(d) clearly shows such. Claim 14 has been amended to require that the core layer “continuously” covers the portions. Norshargh layer covers the structure continuously – in a time-wise fashion. The broadest reasonable interpretation of “continuously” encompasses continuous *in time*. This interpretation is reasonable at least for the reason that applicant indicates that figure 4A has continuous coverage (see October 19, 2006 response, page 8, last full paragraph). Since Applicant’s figure 4A has continuous coverage, it is deemed that Nourshargh has continuous coverage.

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Norshargh does not meet the limitation of etching and depositing simultaneously. Bazylenko teaches to use high density plasma CVD processes to make "super chips" that permit interfaces between optical and electronic technologies (col. 1, lines 16-35; col. 2, lines 54-60; col. 6, lines 15-20; and col. 3, lines 32-45). Liu is cited as showing that HDP CVD has simultaneous deposition and etching and that such prevents material build up and results in better gap filling (col. 6, lines 14-58). It would have been obvious to have simultaneous etching and deposition to make the Nourshargh invention for the advantages disclosed in Bazylenko and Liu.

Claims 15-17, 24-26 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nourshargh 4619680 in view of Liu 6117345 and Bazylenko 6154582 as applied to claim 14 above, and further in view of Klein 3850604.

See how Klein was applied to these claims previously. As pointed out previously, Klein teaches that a typical sputtering system has a target (col. 4, lines 4-8). It would have been obvious to expect to have and use a target as claimed since such is a typical sputtering arrangement.

Additionally and/or alternatively, one can use Klein as the secondary reference and apply the teachings of Liu – have both simultaneous deposition and etching for the advantages that Liu discloses.

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Claims 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nourshargh 4619680 in view of Liu 6117345, Bazylenko, Klein 3850604 and Kestigian 4915810.

See how Kestigian was previously applied. It would have been obvious to use a Kestigian target for the Nourshargh deposition, for the advantages that Kestigian discloses.

Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nourshargh 4619680 in view of Liu 6117345 and Bazylenko 6154582 as applied to claim 14 above, and further in view of Makikawa 6615614.

Makikawa is applied as in the previous Office Actions: it would have been obvious to make the undercladding as claimed for one or more of the advantages that Makikawa discloses.

### ***Response to Arguments***

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Applicant argues that Norshargh does not teach the various deposition techniques. As indicated above, the newly applied references show, that the PVD, etching, target, etc. are all typical, well-known and produce well known advantages. It

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is not invention to substitute known and superior deposition techniques (of the secondary references) for the deposition techniques of a known process (Norshargh).

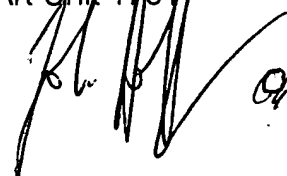
Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Hoffmann whose telephone number is (571) 272 1191. The examiner can normally be reached on Monday through Friday, 7:00- 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

John Hoffmann  
Primary Examiner  
Art Unit 1731

jmh

 12-8-2006